

What is claimed is:

1 1. A method carried out by a computer when executing computer-readable program
2 code, the method comprising:

3 receiving a certain electronic file intended for delivery from a sender to an intended
4 recipient, the certain electronic file having a first file format and containing a computer virus;
5 and

6 prior to the certain electronic file being made available for viewing by the intended
7 recipient, converting the certain electronic file to a second file format that is different from the
8 first file format and that prevents the computer virus from executing when the converted
9 electronic file is opened by the intended recipient.

1 2. The method of claim 1, the certain electronic file being an attachment to an
2 electronic mail sent over a network.

3 3. The method of claim 2, the network including the internet.

4 4. The method of claim 1, said receiving occurring at a desktop computer of the
5 intended recipient.

6 5. The method of claim 1, said receiving occurring at a server computer.

7 6. The method of claim 1, said receiving occurring at a gateway computer.

8 7. The method of claim 1, said converting occurring at a desktop computer of the
9 intended recipient.

1 8. The method of claim 1, said converting occurring at a server computer.

2 9. The method of claim 1, said converting occurring at a gateway computer.

3 10. The method of claim 1, said converting occurring prior to the intended recipient
4 receiving the certain electronic file.

1 11. The method of claim 1, further comprising:

2 determining whether the certain electronic file represents a potential risk to security of a
3 computer system, said converting the certain electronic file being in response to a determination
4 that the certain electronic file represents the potential risk to the security of the computer
5 systems.

1 12 The method of claim 11, said determining whether the certain electronic file
2 represents the potential risk comprising:

3 determining if the certain electronic file contains the computer virus.

1 13. The method of claim 11, said determining whether the certain electronic file
2 represents the potential risk comprising:

3 conducting a heuristic scan of the certain electronic file.

1 14. The method of claim 1, the certain electronic file being a first electronic file,
2 further comprising:

3 receiving a second electronic file intended for delivery from another sender to another
4 intended recipient, the second electronic file having a third file format and containing another
5 computer virus; and

6 prior to the second electronic file being made available for viewing by the another
7 intended recipient, converting the second electronic file to a fourth file format that is different
8 from the third file format and that prevents the another computer virus from executing when the
9 converted second electronic file is opened by the another intended recipient.

1 15. The method of claim 1, the computer virus including a macro virus.

1 16. The method of claim 1, the second file format being at least one of a TXT file
2 format, a RTF file format without embedded objects, a BMP file format, a JPEG file format, a
3 CSV file format, a JPB file format, a GIF file format, a HTML file format without scripts, and a
4 ASCII file format.

1 17. The method of claim 16, the second file format being the HTML file format
2 without scripts.

1 18. The method of claim 16, the second file format being the ACSII file format file.

1 19. The method of claim 16, the second file format being the TXT file format.

1 20. The method of claim 1, the second file format being a file format having text
2 without scripts.

1 21. The method of claim 1, the certain electronic file being at least one of a word
2 processing file, a spreadsheet file, a database file, a graphics file, a presentation file, a
3 compressed file, and a binary executable file.

1 22. The method of claim 1, further comprising:
2 determining if the first file format is one of a word processing file format type and a
3 graphics file format type, the second file format being at least one of a TXT file format, a RTF
4 file format without embedded objects, and a HTML file format without scripts if it is determined
5 that the certain file format is the word processing file format type, the second file format being at
6 least one of a JPB file format, a BMP file format, a GIF file format, a HTML file format without
7 scripts, and a JPEG file format if it is determined that the first file format is the graphics file
8 format type.

1 23. The method of claim 1, the certain electronic file being an electronic file received
2 by at least one of a RTP transfer or a HTTP transfer protocol.

1 24. A method for implementing a security policy, the method comprising:
2 determining whether an electronic file represents a potential risk to security of a computer
3 system; and
4 prior to making the electronic file available to an intended recipient of the electronic file,
5 converting the electronic file into a safe format that ensures that a computer virus in the
6 electronic file is unable to harm the computer system.

1 25. The method of 24, said determining comprising:
2 determining whether the electronic file has a file extension indicative of a file type that
3 supports a potential computer virus.

1 26. The method of 24, said determining comprising:
2 detecting whether the electronic file contains the computer virus.

1 27. The method of 24, said determining comprising:
2 determining whether content of the electronic file reflects a potential computer virus.

1 28. A computer-readable medium having instructions stored thereon, the instructions
2 when executed by a computer cause the computer to:

3 convert a certain electronic file, intended for delivery from a sender to an intended
4 recipient, from a first file format to a second file format, said converting being prior to the certain
5 electronic file being made available for viewing by the intended recipient, the second file format
6 being different from the first file format and preventing a computer virus in the certain electronic
7 file from executing when the converted electronic file is opened by the intended recipient.

1 29. The computer-readable medium of claim 28, the certain electronic file being an
2 attachment to an electronic mail sent over a network.

1 30. The computer-readable medium of claim 28, the instructions when executed by
2 the computer cause the computer to convert the certain electronic file from the first file format to
3 the second file format prior to the intended recipient receiving the certain electronic file.

1 31. The computer-readable medium of claim 28, the instructions when executed by
2 the computer further cause the computer to:

3 determine whether the certain electronic file represents a potential risk to security of a
4 computer system, said converting being in response to a determination that the certain electronic
5 file represents the potential risk.

1 32. The computer-readable medium of claim 31 said determining whether the certain
2 electronic file represents the potential risk comprising:
3 determining if the certain electronic file contains the computer virus.

1 33. The computer-readable medium of claim 28, the instructions when executed by
2 the computer further cause the computer to:
3 determine if the first file format is one of a word processing format type and a graphics
4 format type, the second file format being at least one of a TXT file format, a RTF file format
5 without embedded objects, and a HTML file format without scripts if it is determined that the
6 first file format is the word processing file format type, the second file format being at least one
7 of a JPB file format, a BMP file format, a GIF file format, a HTML file format without scripts,
8 and a JPEG file format if it is determined that the first file format is the graphics file format type.

1 34. The computer-readable medium of claim 28, the computer virus being a macro
2 virus.

1 35. The computer-readable medium of claim 28, the second file format being at least
2 one of a TXT file format, a RTF file format without embedded objects, a BMP file format, a
3 JPEG file format, a CSV file format, a JPB file format, a GIF file format, a HTML file format
4 without scripts, and a ASCII file format.

1 36. An apparatus comprising:
2 a computer having means for receiving a certain electronic file intended for delivery from
3 a sender to a intended recipient, the certain electronic file having a first file format and
4 containing a computer virus, the computer further including means for converting, prior to the
5 certain electronic file being made available for viewing by the intended recipient, the certain
6 electronic file from the first file format to a second file format that is different from the first file
7 format and that prevents the computer virus from executing when the converted electronic file is
8 opened by the intended recipient.

1 37. The apparatus of claim 36, said computer being a desktop computer of the

2 intended recipient.

1 38. The apparatus of claim 36, said computer being a server computer of a local area
2 network.

1 39. The apparatus of claim 36, said computer being a gateway computer.